UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,005	07/30/2001	Markus Gross	A34695 071308.0192	9747

21003 7590 03/29/2005

BAKER & BOTTS
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
HABTE, ZEWDU	
ART UNIT	**PAPER NUMBER**
2661	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/918,005	GROSS ET AL.	
	Examiner	Art Unit	
	Zewdu Habte	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-8 and 12-15* is/are rejected.

7)☒ Claim(s) *5,9-11 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. In claims 5, 8, 9, 10 are objected to because of the following informalities:

In claim 5, line 1, "a slave unit" should be changed to – the slave unit–.

In claim 8, line 2, "a slave unit" should be changed to – the slave unit–.

In claim 9, lines 1-2, "a slave unit" should be changed to – the slave unit–.

In claim 10, line 2, "a slave unit" should be changed to – the slave unit–.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,13,14,15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With regards to claims 1, 13, 14,15 a communication system using Ethernet physics is not adequately disclosed in the specification. It is not clear what Ethernet physics is.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "method according to claims 2 and 5", it is an improper use of a multiple dependent claim. 35 U.S.C. 112 authorizes multiple dependent claims in applications filed on and after January 24, 1978, as long as they are in the alternative form (e.g., "A machine according to claims 3 or 4, further comprising ---"). Cumulative claiming (e.g., "A machine according to claims 3 and 4, further comprising ---") is not permitted. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

6. Claims 1-4, 6-8, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fellman et al. (US 6215797 B2).

As to claim 1, Fellman discloses a method to avoid packet delays in Ethernet networks using real time packet transmission between network devices in Fig. 2. As illustrated in Fig. 2, Fellman discloses a plurality of real time devices 200 (network subscribers) within the network 110 (a communication system). In the network 110, Fellman uses one of the device adapters 1000 as a master timing transmitter (a master unit) (col. 8, lines 20-25) for the rest of device adapters 1000, which Fellman called a slave device adapter (slave units) (col. 8, lines 30-31) for timing synchronization purposes while frames (messages) are being sent (transmitted) to the rest of the slave devices in the network 110 (the communication system) (col. 8, lines 25-27). Furthermore, Fellman discloses the synchronization process continues for a predetermine amount of time (cyclically with equidistant sampling time) (col. 8, lines 28-29) with the local clock 1010 (a common time base), which is included in each slave device 1000 as illustrated in Fig. 3 (col. 8, line 24-25). In addition, Fellman discloses that each frame is assigned a dedicated time slot (access control) (col. 4, lines 47-51) to transmit messages in the network as a supplement of a well-known CSMA/CD arbitration method (timeslot access method) (col. 7, lines 36-45).

As to claim 2, Fellman discloses a master timing transmitter device adapter 1000 that synchronizes the local clock 1010 of each adapter or slave device (slave units) with its own clock 1010 (respective timer) every predetermined number of frames (predetermined overall cycle time) (col. 8, lines 23-29). For example, as Fellman

discloses in Fig. 4, each frame (overall cycle time) has an assigned section, and the assigned section is divided into phases among the respected device adapters 1000 (slave units) (col. 9, lines 15-19). The device adapters 1000 (slave units) adjust its local clock 1010 at regular intervals (cyclically) in order to minimize delays, which Fellman called drifts (col. 8, line 32), between synchronization signals with the master device adapter (master unit); this way the master device adapter adjusts its clock as well (respective timer is set cyclically) to send signal accordingly (a respective slave-specific synchronization with master unit) (col. 8, lines 33-39).

As to claim 3, Fellman discloses a packet transmitted by a particular device (user data messages) (col. 10, lines 8-9) and a guard phase (specific synchronization information item) which accounts for delays (specific synchronization messages), and makes a frame that gets transmitted (col. 10, lines 14-20) respectively, as illustrated in Fig. 4.

As to claim 4, Fellman discloses the guard phase (specific synchronization information item) included (integrated) at the start of each frame during which no device adapter 1000 transmits packets (user data messages) (col. 10, lines 14-16).

As to claim 6, Fellman discloses a device adapter 1000 (slave unit) which is allowed to transmit packets only using the phase assigned to it (col. 9, lines 50-52). The assignment of phases to the device adapters 1000 is coordinated by the master device (the master unit has transmission authorization in the communication system) in response to requests by the slave units (col. 9, lines 63-67). The master device adapter (master unit) transmits a frame-start signal (initialization) (col. 10, lines 1-2), and

broadcasts this information to the device adapters (reports to each slave unit) (col. 10, lines 8-10). Also, Fellman discloses each phase (time slot) in a frame (overall cycle time), which includes free access guard phase (time slot in which slave units send messages), is divided among the device adapters (slave units); these depend upon the packet size of the device adapters that are online (col. 10, lines 5-7), and if one of the device adapters predict signal delays, it uses the guard phase to synchronize transmission with the master device within the frame (col. 10, lines 16-19 and col. 10, lines 44-52).

As to claim 7, Fellman discloses that each frame is divided among device adapters (slave units) as illustrated in Fig. 4, and the guard phase is included in the frame to be used for synchronization by the slave units.

As to claim 8, Fellman discloses a device adapter (slave unit) that stores packets during the assigned transmission phase (instantaneous values) in the memory 1012 (col. 9, lines 58-60).

As to claim 12, Fellman discloses (implicitly taught because in order to have voice communication, a network has to have full-duplex line).

As to claim 14, Fellman discloses a real-time traffic arbitration mechanism for Ethernet networks illustrated in Fig. 2 (col. 4, lines 40-53).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the**

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fellman in view of Fuchsreiter et al. (US 5544314).

As to claim 15, Fellman discloses a real-time traffic arbitration mechanism for Ethernet networks, illustrated in Fig. 2 (col. 4, lines 40-53), but Fellman does not disclose a hierarchical network having point-to-point connections. Fuchsreiter discloses a hierarchical network for point-to-point connections (abs. lines 1-4). It would have been obvious to a person of ordinary skill at the time of the invention to combine Fellman with Fuchsreiter to develop a hierarchical network having point-to-point connections, since doing so would allow messages to propagate from a transmitter device that has a higher hierarchy to a receiver device that has a lower hierarchy in a different point-to-point connection, in the event an original point-point connection fails.

Allowable Subject Matter

9. Claims 5, 9-11 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zewdu Habte whose telephone number is 571-272-3115. The examiner can normally be reached on 8:30-5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can

be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zewdu Habte (Zed)
Examiner
Art Unit 2661

ZH

KENNETH VANDERPUYE
PRIMARY EXAMINER